

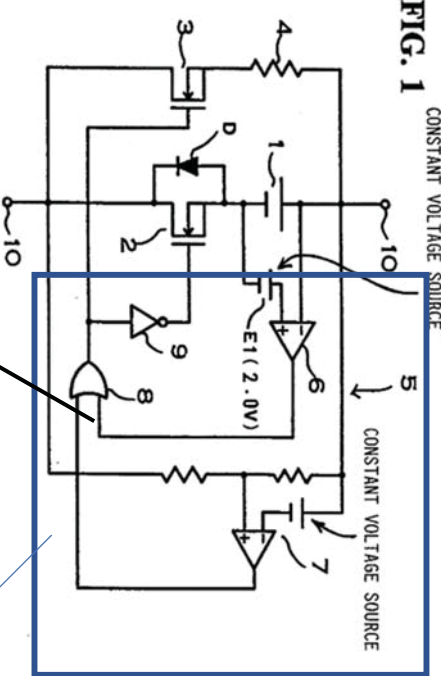
EXHIBIT A

Exhibit A: Claim Chart for U.S. Pat. No. 6,346,795

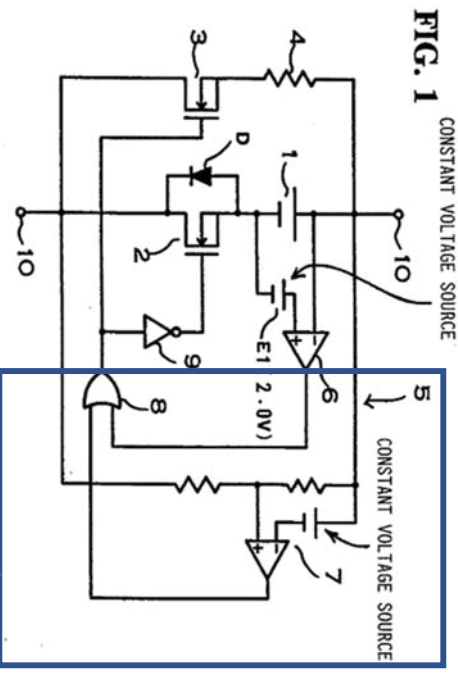
Based on:

U.S. Pat. No. 5,397,974 to Tamai, *et al.* (“the ‘974 patent”)
(Filed Jan. 18, 1994; Priority Date Jan. 19, 1993; Issued Mar. 14, 1995)

Claim Element	Claim Language — U.S. Patent No. 6,346,795	Exemplary Disclosures from the ‘974 patent
1[pre]	A discharge control circuit for controlling discharge of a battery including at least one cell comprising:	<p>To the extent the preamble is limiting, the ‘974 patent discloses “a discharge control circuit for controlling discharge of a battery including at least one cell,” at least under Celebration IP’s interpretation of that term in its Complaint.</p> <p><i>See, e.g.:</i></p> <p>“The present invention relates to an overdischarge prevention circuit for a rechargeable] battery.” (‘974, Col. 1, lines 6-7).</p> <p>“In order to prevent such overdischarging of a rechargeable battery, a circuit has been adopted in which the battery voltage of the rechargeable battery is detected and discharging of the rechargeable battery is interrupted when the detected battery voltage becomes lower than a predetermined value.” (‘974, Col. 1, lines 12-18).</p> <p>“The overdischarge prevention circuit is further provided with a control circuit 5 for controlling ON and OFF states of the first switch element 2 and the second switch element 3.” (‘974, Col. 2, lines 60-63).</p>
1[a]	a discharge control switch connected to the battery for cutting off a discharge current of the battery in response to a	<p>The ‘974 patent discloses “a discharge control switch connected to the battery for cutting off a discharge current of the battery in response to a discharge stop signal,” at least under Celebration IP’s interpretation of that term in its Complaint.</p> <p><i>See, e.g.:</i></p>

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		<p>switch element 2, and is applied through the OR gate 8 to the second switch element 3. Therefore, the first switch element 2 is put into an OFF state and the second switch element 3 is put into an ON state. <u>As a result, discharging from the rechargeable battery 1 is interrupted.</u> ('974, Col. 3, lines 20-29). (Emphasis added).</p>
1[b]	<p>a control circuit connected to the battery and the discharge control switch for generating the discharge stop signal that deactivates the discharge control switch when a voltage of at least one cell reaches a lower limit,</p>	<p>The '974 patent discloses “a control circuit connected to the battery and the discharge control switch for generating the discharge stop signal that deactivates the discharge control switch when a voltage of at least one cell reaches a lower limit,” at least under Celebration IP’s interpretation of that term in its Complaint. See, e.g.:</p> <p>FIG. 1</p>  <p>FIG. 1 is a schematic diagram of a battery system. It includes a battery 1 connected to a discharge control switch 2. A control circuit 5 is connected to the battery and the switch. The control circuit includes a first switch element 2, a second switch element 3, an OR gate 8, and an AND gate 9. A constant voltage source 10 is connected to the battery and the control circuit. A discharge stop signal is generated by the control circuit when the voltage of at least one cell reaches a lower limit.</p> <p>Discharge Stop</p> <p>Control Circuit</p> <p>'974, FIG. 1, with the control circuit illustrated.</p>

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		<p>“... a control circuit controls ON and OFF states of the first switch element and the second switch element.” ('974, Abstract) (Emphasis added).</p> <p>“The control means turns OFF the first switch element and at the same time turns ON the second switch elements when the voltage of the rechargeable battery becomes lower than a predetermined value.” ('974, Col. 2, lines 6-9).</p> <p>“The overdischarge prevention circuit is further provided with a control circuit 5 for controlling ON and OFF states of the first switch element 2 and the second switch element 3. The control circuit 5 is provided with a first detector 6, a second detector 7, an OR gate 8 and an inverter 9. The first detector 6 detects the battery voltage of the rechargeable battery 1, and detector 6 produces a low level signal when the detected voltage is higher than a reference voltage E1(2.0 V in this embodiment), and produces a high level signal when it is lower than 2.0 V. The second detector 7 produces a low level signal when the voltage applied to both ends of the rechargeable battery 1 is higher than 1.(E2), and produces a high level signal when it is lower than 1.9 V. The OR gate 8 and the inverter 9 constitute a change over circuit which turns ON or OFF the first switch element 2 and the second switch element 3 in accordance with outputs of the first detector 6 and the second detector 7. In FIG. 1, numerals 10, 10 indicate charging and discharging terminals of the rechargeable battery 1.” ('974, Col. 2, line 60, -col. 3, line 11) (Emphasis added).</p>
1[c]	wherein the control circuit includes a switch holding circuit for continuously supplying the discharge stop signal	To the extent that “a predetermined time” is construed to mean any amount of time, which Maxim Integrated does not concede, the '974 patent discloses this claim element.

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	<p>to the discharge control switch for a predetermined time after the discharge stop signal is generated.</p>	<p>See, e.g.,</p>  <p>FIG. 1 CONSTANT VOLTAGE SOURCE</p> <p>CONSTANT VOLTAGE SOURCE</p> <p>2.0V</p> <p>10</p> <p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>E1</p> <p>Switch Holding Circuit</p> <p>'974, FIG. 1 with the switch holding circuit illustrated.</p> <p>“The second switch element maintains the first switch element in OFF state even when the battery voltage of the rechargeable battery rises by self resetting of the rechargeable battery. When a charging voltage is applied to the rechargeable battery, the control circuit then turns ON the first switch element and turns OFF the second switch element.” ('974, Abstract).</p> <p>“The second detector 7 produces a low level signal when the voltage applied to both ends of the rechargeable battery 1 is higher than 1.(E2), and produces a high level signal when it is lower than 1.9 V. The OR gate 8 and the inverter 9 constitute a change over circuit which turns ON or OFF the first switch element 2 and the second switch element 3 in accordance with outputs of the first detector 6</p>

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		<p>and the second detector 7. In FIG. 1, numerals 10, 10 indicate charging and discharging terminals of the rechargeable battery 1.” ('974, Col. 3, lines 1-11).</p> <p>“When both of the switch elements 2,3 are so switched as above-mentioned [(switch 2 off and switch 3 on)], sometimes the battery voltage of the rechargeable battery 1 becomes higher than 2.0 V through self resetting and therefore the first detector 6 produces a low level signal, but since the second switch element 3 is in an ON state, the voltage between the charging and discharging terminals 10, 10 is OV, and therefore the second detector 7 produces a high level signal. <u>As a result, the first switch element 2 is kept in an OFF state and the second switch element 3 is kept in ON state respectively.</u> Therefore, chattering of the first switch element 2 is prevented from occurring, and the intermittent continuance of discharging from the rechargeable battery 1 can be entirely prevented.” ('974, Col. 3, lines 30-43) (Emphasis added).</p> <p>“In this state, when a charging voltage higher than 1.9 V (usually a constant voltage of 4.2 V) is applied to the charging and discharging terminal 10 by a charger (not shown), the second detector 7 detects the applied charging voltage and the second detector 7 produces a low level signal. <u>On the other hand, when the battery voltage of the rechargeable battery 1 becomes higher than 2.0 V through self resetting, the first detector 6 also produces a low level signal. Therefore, the output of the OR gate 8 is also a low level signal, and the first switch element 2 is put into an ON state and the second switch element 3 is put into an OFF state.</u> As a result, the interruption of the discharging of the rechargeable battery 1 is removed.” ('974, Col. 3, lines 44-57) (Emphasis added)</p> <p>To the extent that the '974 patent does not expressly disclose this claim element, the '974 patent, alone or in combination with other prior art, renders the claimed subject matter obvious. For example, as shown in Exhibit B, U.S. Patent No. 5,959,437 to Hamaguchi (“the '437 patent”) discloses this claim element, at least as Celebration IP has interpreted it in its Complaint. A person of ordinary skill in the art would have been motivated to combine the '974 patent and the '437 patent at</p>

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		<p>least because the patents both relate to battery discharge control and purport to solve similar problems.</p>